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A NEW SPECIES OF *MYRMOTERAS* FROM CEYLON (HYMENOPTERA: FORMICIDAE)¹

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Several specimens of a new ant belonging to the genus *Myrmoteras* were collected recently on the Island of Ceylon by Dr. Edward O. Wilson, and were sent to me for study and description.

Myrmoteras ceylonica sp. nov.

Fig. 1

Worker: Length, 3.09 mm.; head length (excluding mandibles), 0.90 mm.; head index, 0.94; thorax length, 1.17 mm.

The head of this species is heavily granulate, except for the shining occiput, occipital flange, and gula, and recalls the condition of *M. williamsi*, but unlike the latter species in which the cephalic furrow is marked, *ceylonica* shows no more than an elusive trace of this furrow. In certain lights, a narrow, median line of reduced and more widely spaced granules permits the area to shine and thus give a faint resemblance to the groove of other species such as *binghami*, *donisthorpei*, *williamsi*, or *karnyi*. *M. ceylonica*, therefore, belongs in that subdivision of the genus in which the head does not possess a median longitudinal furrow, or in which such a furrow is short and indistinct or nearly obsolete. Previously, only three species were found in this group, namely, *mjoebergi*, *kemneri*, and *barbouri*.

The new species may be distinguished at once from *mjoebergi* (3-5.6 mm.) by its smaller size (3.09 mm.) and

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by the heavy granulate sculpture of the head, for in the latter species the head, according to previous authors, is very smooth and shining. From *barbouri* (6.9 mm.), it may be separated by its much smaller size, by the possession of two distinct denticles between the last and the penultimate mandibular teeth, and by the presence of more or less longitudinal rather than transverse rugae on the mesonotum.

In the published keys to the species of *Myrmoteras* (Creighton, 1930; Wheeler, 1933; Gregg, 1954), the Ceylon specimens run easily to *M. kemneri*. Despite their apparent close relationship to this species, consideration of the structural details and size of *kemneri* (6 mm.), and the wide distributional gap between the two, make it quite evident they represent different species. Although the

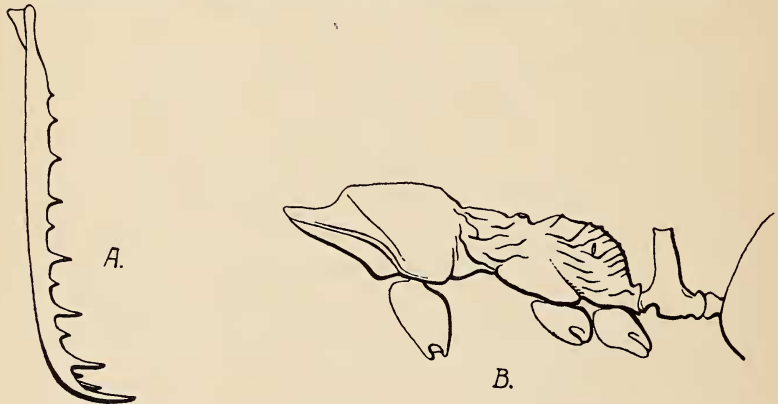


Fig. 1. *Myrmoteras ceylonica* sp. nov. A. Right mandible. B. Profile of thorax and petiole.

author has not seen a specimen of *kemneri*, a study of the description and the figures given by Wheeler enable me to provide the following comparisons. The antennal scape in *ceylonica* surpasses the occipital corner by a distance equal to a little less than one-half its total length, while in *kemneri* the scape surpasses the corner by an amount equal to a little more than one-half its total length. Mandibular teeth in *ceylonica* number 11, not counting the minute ante-apical denticles, whereas there are 10 in

kemneri. Further, the 5th, 7th, and 9th teeth in *ceylonica* are distinctly smaller than the ones with which they alternate, while in *kemneri* only the 8th appears to be smaller (Fig. 1). In profile, the dorsal surface of the pronotum is flat in the center and passes through distinct angles to slope both anteriorly and posteriorly, whereas in *kemneri* the pronotum shows an even and relatively low convexity from front to back. The mesothorax of *ceylonica* is short in side view, being almost quadrate, and with a flat dorsal contour that depresses slightly to the meso-epinotal suture. The same structure in *kemneri* is decidedly elongate and shallowly saddle-shaped with prominent mesonotal spiracles. The epinotum of *ceylonica* is about as high as it is long with an even curvature dorsally, while that of *kemneri* is very much longer than high and its dorsal contour arches upward to the rear. Probably the most distinctive feature separating these two ants is the petiole. In *ceylonica* the anterior and posterior peduncles are quite short, the scale is narrow antero-posteriorly, and high, with flat, nearly vertical front and rear surfaces; the crest is truncated and margined anteriorly and posteriorly with minute but definite ridges, which give the summit of the node an appearance of being depressed or concave. By contrast, in *kemneri*, the posterior peduncle is longer than the anterior, the anterior and posterior surfaces of the node are rounded and sloping, and the crest is evenly rounded in all directions.

Sculptural features of the head in the two species seem to be remarkably similar, as they are heavily granulate and give the surface a coriaceous and opaque appearance. The same condition is true of the pronota also, though this structure is a little more shining at least in *ceylonica* owing probably to the large size of the granules. The mesonotum and epinotum of *ceylonica*, unlike the smooth, opaque, almost sculpturless corresponding structures of *kemneri*, are furnished with pronounced rugae that are more or less longitudinal on the mesonotum, but very heavy and distinctly transverse on the dorsum of the epinotum. Rugae of the mesopleurae and epinotal pleurae are longitudinal but finer in texture. The interrugal

granules of all these areas are sparse, causing a general shininess of the regions despite their heavy sculpture. The surfaces of the petiole and the gaster are very shining and thus different from the dull aspect of these parts in *kemneri*.

In color, *ceylonica* does not appear to differ significantly from *kemneri*. The head and thorax are rich reddish brown, the petiole and gaster a bit lighter brown, and the mandibles, antennae, and legs yellowish to yellowish brown. Hairs pale yellow.

Holotype: worker (in the collection of the Museum of Comparative Zoology).

Paratypes: two workers (one in the M.C.Z. and one in the author's collection).

Type locality: Udawaddatekele Sanctuary, Kandy, Ceylon; elevation 2000 feet; collected by E. O. Wilson, July 13, 1955, No. 1245.

Dr. Wilson has been able to supply a few natural history notes concerning *Myrmoteras ceylonica*. The workers were observed in second growth tropical evergreen forest, and were found to be foraging during daylight hours on the ground and over low herbaceous vegetation. They were said to be in the company of individuals of *Tetramorium* and *Trigonogaster*, and moved with about the pace of a *Tetramorium caespitum*. When they were disturbed, their mandibles were thrown open and seemingly "locked" at approximately 200°.

In a previous paper (1954), I discussed the known limits of distribution of the genus *Myrmoteras*, and included a tentative map showing the supposed range of these ants. The present specimens and the new species which they represent, extend the distribution beyond the boundaries of the Indo-Malayan region to the Island of Ceylon. Such a pattern suggests that the genus may be represented in India, but until actual records showing this have been obtained, it is impossible to make such a claim. The northernmost localities for these ants at present are Tenasserim, Burma, and the Island of Hainan off the southeast coast of China.

LITERATURE CITED

CREIGHTON, W. S.

1930. A review of the genus *Myrmoterias*. Jour. N.Y. Ent. Soc., 33:177-192, 2 figs., 1 pl.

GREGG, R. E.

1954. Geographical distribution of the genus *Myrmoterias*, including the description of a new species. Psyche, 61:20-30, 2 figs.

WHEELER, W. M.

1933. A new *Myrmoterias* from Java. Proc. New England Zool. Club, 13:73-75, 1 fig.

A SYNONYM IN THE GENUS *CHRYSOPA* (NEUROPTERA: CHRYSOPIDAE)—Banks described *Chrysopa sperryi* (Psyche 50:74-75) as differing from all other species of the *plorabunda* section in lacking genal markings. An examination of the type (from Riverside, Calif., Sept. 7, 1940, ♀, Sperry: here designated lectotype), paratypes, and additional material from Riverside disclosed every gradation from no genal marks to well-defined red ones. The type and all but one of the paratypes are faded or pale individuals of *Chrysopa comanche* Banks 1938 (Can. Ent. 70:119-120); *sperryi* is therefore a synonym of this species. One of the paratypes, collected at the same time as the others, is a faded male *C. plorabunda californica* Coq., which lacks the red on the cheeks, but has the black mark plainly visible. A long series of *comanche* from Sabino Canyon, Baboquivari Mts., Arizona, Sept., 1951 (L. M. Martin, Los Angeles County Museum) also shows every gradation between well-defined cheek markings and none at all; the holotype of *comanche*, from Laredo, Texas, has only the faintest trace of the red marks. These identifications were made with the aid of male genitalic characters.
— PHILLIP A. ADAMS, Harvard University.